

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. FOR A CERTIFICATE OF)	CASE NO.
PUBLIC CONVENIENCE AND NECESSITY)	2025-00057
AUTHORIZING THE PHASE FOUR)	
REPLACEMENT OF THE AM07 PIPELINE)	

ORDER

On March 13, 2025, Duke Energy Kentucky, Inc. (Duke Kentucky) filed an application pursuant to KRS 270.020 and 807 KAR 5:001, Section 15, seeking a Certificate of Public Convenience and Necessity (CPCN) to construct phase four of a five-phase project to replace its AM07 natural gas pipeline. No party requested intervention in this proceeding. Duke Kentucky responded to one set of requests for information from Commission Staff.¹ On June 6, 2025, Duke Kentucky requested that this matter be submitted on the written record. This matter stands submitted for a decision based on the written record.

LEGAL STANDARD

No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission.² To obtain a CPCN, the

¹ Duke Kentucky's Response to Commission Staff's First Request for Information (Staff's First Request) (filed May 8, 2025).

² KRS 278.020(1). Although the statute exempts certain types of projects from the requirement to obtain a CPCN, the exemptions are not applicable.

utility must demonstrate a need for such facilities and an absence of wasteful duplication.³

“Need” requires:

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.⁴

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”⁵ To demonstrate that a proposed facility does not result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.⁶ Although cost is a factor, selection of a proposal that ultimately costs more than an

³ *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

⁴ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁵ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁶ Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005), Order at 11.

alternative does not necessarily result in wasteful duplication.⁷ All relevant factors must be balanced.⁸

BACKGROUND

Duke Kentucky's plan to replace the AM07 gas pipeline was described in its prior rate proceeding, Case No. 2021-00190.⁹ Duke Kentucky intended a five-phase construction plan involving the replacement of approximately 13.7 miles of pipeline in Northern Kentucky.¹⁰ Duke Kentucky obtained a CPCN for Phase One in Case No. 2022-00084,¹¹ Phase Two in Case No. 2023-00210,¹² and Phase Three in Case No. 2024-00189.¹³ In the present case, Duke Kentucky seeks a CPCN for Phase Four, which includes the replacement of approximately 2.5 miles of transmission pipeline with 2.3

⁷ See *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), final Order.

⁸ Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), final Order at 6.

⁹ Case No. 2021-00190, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of The Natural Gas Rates; 2) Approval of New Tariffs, and 3) All Other Required Approvals, Waivers, and Relief* (Ky. PSC Dec. 28, 2021), final Order at 6.

¹⁰ Application at 2.

¹¹ Case No. 2022-00084, *Electronic Application of Duke Energy Kentucky, Inc. for a Certificate of Public Convenience and Necessity Authorizing the Phase One Replacement of the AM07 Pipeline* (Ky. PSC Feb. 24, 2023), Order at 7.

¹² Case No. 2023-00210, *Electronic Application of Duke Energy Kentucky, Inc. for a Certificate of Public Convenience and Necessity Authorizing the Phase Two Replacement of the AM07 Pipeline* (Ky. PSC Apr. 2, 2024), Order at 8.

¹³ Case No. 2024-00189, *Electronic Application of Duke Energy Kentucky, Inc. for a Certificate of Public Convenience and Necessity Authorizing the Phase Three Replacement of the AM07 Pipeline* (Ky. PSC Jan. 17, 2025), Order at 8.

miles of 24-inch diameter steel pipeline.¹⁴ Duke Kentucky plans to abandon the existing pipeline,¹⁵ which was constructed from steel pipe installed in 1956.¹⁶

Duke Kentucky provided the estimated costs of the remaining phases of construction as follows: \$43,136,000 for Phase Four and \$32,160,000 for Phase Five.¹⁷ The estimated annual operations and maintenance cost for the new stretch of pipeline is less than \$10,000.¹⁸ Testing required by the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) would be required ten years after the construction of the new pipeline and every seven years afterwards¹⁹ at a cost of \$400,000 to \$500,000 using the Inline Inspection (ILI) tool.²⁰

Duke Kentucky's stated purposes for the replacement of the AM07 pipeline were twofold. First, Duke Kentucky claimed that the existing, aging A.O. Smith (AOS) steel pipe has a long history of failures due to hard spots in the pipe body along with failures on the longitudinal seam.²¹ Duke Kentucky asserted that replacement of this 1956 vintage pipe would increase safety and reliability of the pipeline, support future load

¹⁴ Application at 4.

¹⁵ Direct Testimony of Melton A. Huey (Huey Direct Testimony) at 5.

¹⁶ Application at 5. Duke Kentucky uses a useful life of 67 years for transmission lines pursuant to Case No. 2021-00190, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of the Natural Gas Rates; 2) Approval of New Tariffs, and 3) All Other Required Approvals, Waivers, and Relief* (Ky. PSC Dec. 28, 2021), Order at 32, approving the Joint Stipulation, which approved existing depreciation rates, including 67 years for transmission pipeline based on 1.49 percent depreciation rate. See Application (filed June 1, 2021), Vol. 13, Exhibit WPB-2.2g.

¹⁷ Huey Direct Testimony at 10.

¹⁸ Application at 12.

¹⁹ 49 C.F.R. § 192.939(b)(6).

²⁰ Application at 8.

²¹ Huey Direct Testimony at 5–6.

growth, and maintain pressures.²² Second, the new pipeline would allow the use of the ILI tool.²³

Absent the use of the ILI tool for PHMSA testing, Duke Kentucky would be required to perform pressure testing.²⁴ Duke Kentucky estimated that the cost of pressure testing the existing portion of pipeline to be replaced in the Phase Four segment would be \$11 million every seven years.²⁵ This would include providing a mobile source of temporary liquid natural gas while bypassing portions of the existing pipeline, so service would not be interrupted for lengthy periods of time.²⁶

Another option to comply with PHMSA testing requirements would be retrofitting existing pipeline for use with the ILI tool. This would also require using temporary gas during the retrofit but would prevent the future need for bypassing during testing because the ILI tool allows testing without pipeline interruption.²⁷ The estimated cost of this option is \$8.75 million.²⁸

Duke Kentucky stated that the estimated costs for both pressure testing and ILI retrofit would not include the cost of remedying deficiencies in the aging pipeline discovered during pressure testing or ILI testing after retrofit, which cannot be predicted,

²² Application at 8.

²³ Application at 8.

²⁴ 49 C.F.R. § 192.921(a)(2).

²⁵ Application at 8.

²⁶ Application at 8.

²⁷ Application at 8.

²⁸ Application at 8.

and which would also increase the downtime of the pipeline and therefore increase temporary gas cost.²⁹

DISCUSSION AND FINDINGS

Having considered the application and all evidence in the record, the Commission finds that the CPCN should be granted. One of the following is necessary to comply with PHMSA regulations: 1) replacement of the AM07 pipeline and use of ILI testing, 2) retrofitting the existing AM07 pipeline for ILI use, or 3) implement a pressure testing procedure that requires bypassing the pipeline during testing. Although the \$43,136,000 in known costs involved in replacement exceeds the \$11 million in known pressure testing costs, the pressure testing would be required every seven years. As a result, the cost of pressure testing would be comparable to the cost of replacement and ILI testing after 21 years.³⁰

	Proposed Replacement and Maintenance Costs	ILI Retrofitting (Does not include remedial work cost)	Pressure Testing Costs (Not including remedial)
Year 0	\$43,100,000.00	\$23,125,000.00	
Year 7		\$500,000.00	\$11,000,000.00
Year 10	\$500,000.00		
Year 14		\$500,000.00	\$11,000,000.00
Year 17	\$500,000.00		
Year 21		\$500,000.00	\$11,000,000.00
Year 25	\$500,000.00		

²⁹ Application at 9.

³⁰ Direct Testimony of Kelsey M. Pace at 10. The useful life of the replacement pipeline is approximately 67 years. Response to Staff's First Request, Item 2(a).

Year 28		\$500,000.00	\$11,000,000.00
Total	\$44,600,000.00	\$25,125,000.00	\$44,000,000.00

Although retrofitting for ILI use would be cheaper than replacement if evaluating only capital expenditures and PHMSA testing costs, neither the retrofitting nor pressure testing options account for the uncertain cost of repairing leaks or other deficiencies in the aging pipe that would be necessary every time testing is conducted. These uncertain costs would almost certainly eventually outweigh the capital cost difference as the existing pipeline has already been used beyond its expected useful life.³¹

Replacement also has additional benefits beyond meeting PHMSA requirements and reducing the cost of maintenance required due to continued use of aging pipeline. Fewer leaks as a result of installing new pipeline adds to the reliability of the system as a whole,³² reducing interruptions and reducing maintenance costs. Volatility of natural gas prices could add cost to temporary gas used during pressure testing or ILI retrofitting in the future. Compared to pressure testing, use of the ILI tool also allows more detailed inspection.

Accordingly, the Commission finds that Duke Kentucky has demonstrated the need for Phase Four of the construction project, which includes the of replacement of approximately 2.5 miles of transmission pipeline with 2.3 miles of 24-inch diameter steel pipeline. Phase Four of the project will allow Duke to comply with PHMSA regulations

³¹ See footnote 16 of this Order.

³² Huey Direct Testimony at 6.

and replacement of the A07 pipeline is the least-cost reasonable alternative to meet that need. Duke has further demonstrated that implementation of Phase Four of the project will not result in wasteful duplication as Phase Four will replace the current A07 pipeline.

IT IS THEREFORE ORDERED that:

1. Duke Kentucky's request for a CPCN for Phase Four of the proposed project described in its application is granted.

2. Duke Kentucky shall immediately notify the Commission upon knowledge of any material changes to the project, including, but not limited to, a material increase in costs and any significant delays in construction.

3. Any material deviation from the construction approved by this Order shall be undertaken only with the prior approval of the Commission.

4. Duke Kentucky shall file with the Commission documentation of the total costs of the projects, including the cost of construction and all other capitalized costs, (e.g. engineering, legal, administrative, etc.) within 60 days of the date that construction authorized under this CPCN is substantially completed. Construction costs shall be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for sewer utilities as prescribed by the Commission.

5. Duke Kentucky shall file a copy of the as-built drawings, if any, and a certified statement that the construction has been satisfactorily completed in accordance with the plans and specifications within 60 days of the substantial completion of the construction certificated herein.


6. Any documents filed in the future pursuant to ordering paragraphs 2 through 5 shall reference this case number and shall be retained in the post-case correspondence file for this proceeding.

7. The Executive Director is delegated authority to grant reasonable extensions of time for filing any documents required by this Order upon Duke Kentucky's showing of good cause for such extension.

8. This case is closed and is removed from the Commission's docket.

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PUBLIC SERVICE COMMISSION


Chairman


Commissioner


Commissioner

ATTEST:


Executive Director



Case No. 2025-00057

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